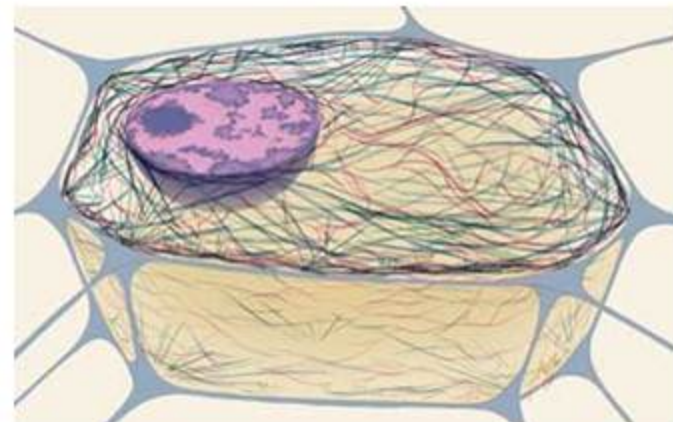
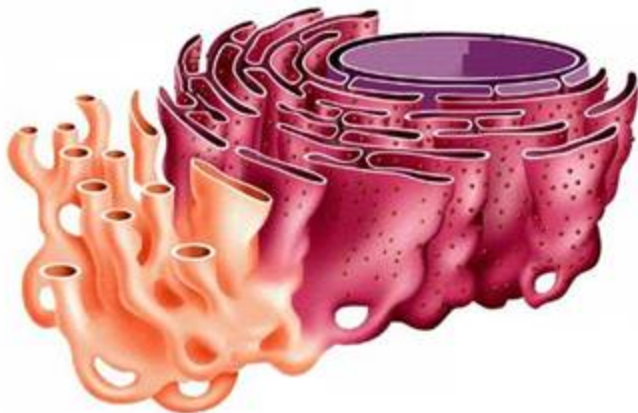


THE CELL

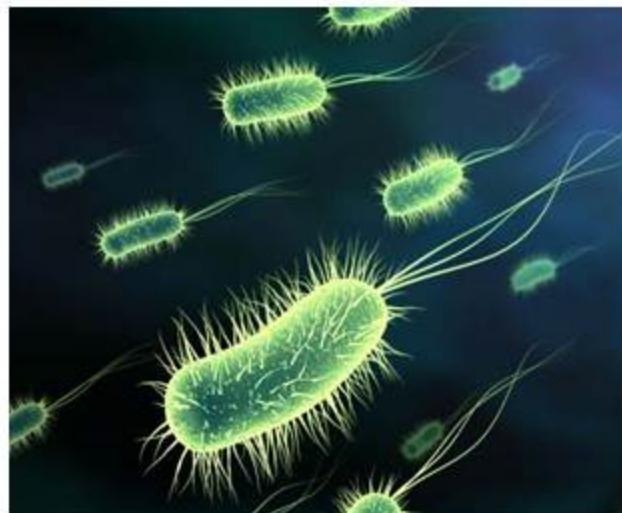
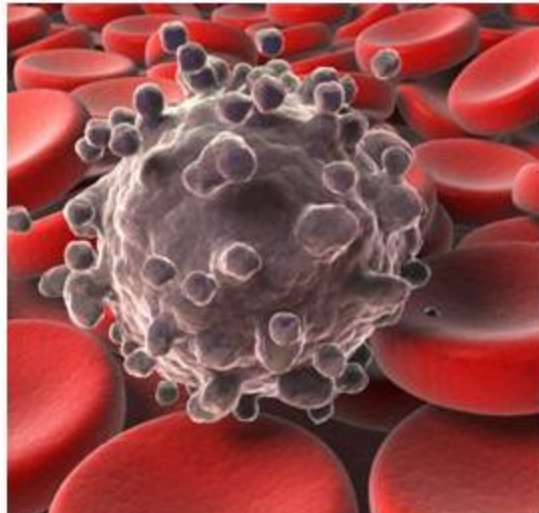


General Structure of a Cell

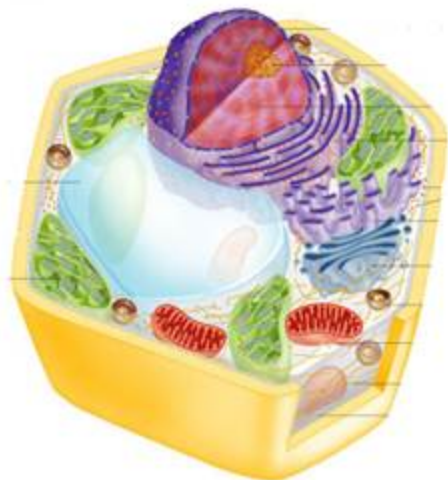
Cells are the basic structural and functional units of life.

There are many different kinds of cells, which are specialized to carry out particular functions.

In spite of this, cells have many common features.



General Structure of a Cell



Cell Part	Plant, animal or both	Function
cell membrane	both	<ul style="list-style-type: none">•semi-permeable•controls what enters/leaves•composed of phospholipid bilayer, proteins, carbohydrates (fluid mosaic model)
cell wall	plant	<ul style="list-style-type: none">•tough rigid outer boundary•protection
cytoplasm	both	
ribosomes	both	<ul style="list-style-type: none">•make proteins

General Structure of a Cell



Cell Part	Plant, animal or both	Function
smooth endoplasmic reticulum (SER)	both	
rough endoplasmic reticulum (RER)	both	<ul style="list-style-type: none"> •canals with ribosomes attached (area for protein synthesis)
Golgi apparatus	both	<ul style="list-style-type: none"> •stacks of membranes which modify
lysosomes	animal	<ul style="list-style-type: none"> •contain enzymes (proteins) that can

General Structure of a Cell



Cell Part	Plant, animal or both	Function
Mitochondria (write at the bottom)	both	
centrioles	animal	•a pair of cylinders that aid in cell division
plastids	plant	•free-floating membrane-bound sac for storage example:chloroplast → photosynthesis
vacuoles	both	•large (plants), small (animals) membrane-bound sacs filled with water •Turgor pressure

General Structure of a Cell



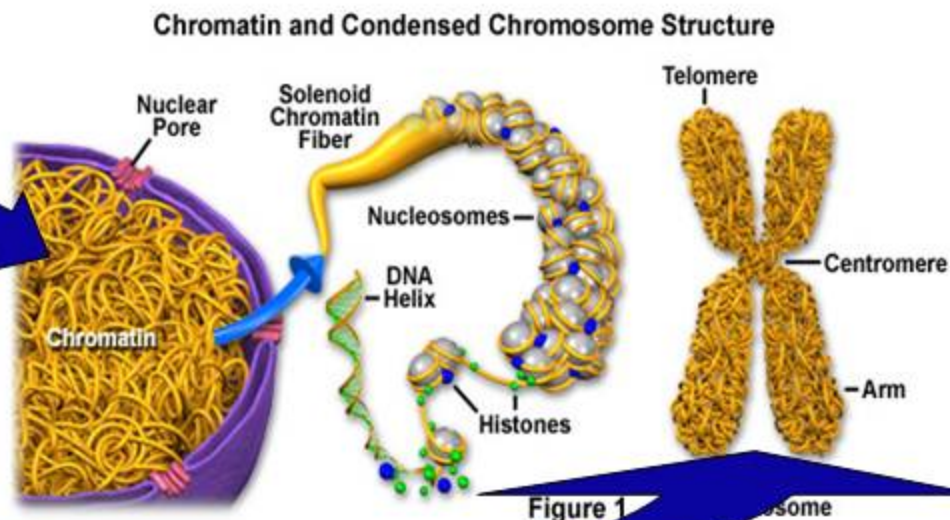
Cell Part	Plant, animal or both	Function
nucleus	both	<ul style="list-style-type: none">•control centre of the cell•directs all of the cell's activities
nuclear membrane	both	
nucleoplasm	both	
nucleolus	both	

General Structure of a Cell

Cell Part	Plant, animal or both	Function
DNA	Both	<ul style="list-style-type: none"> •genetic material •contains instruction for what proteins to make
CHLOROPLAST Do on your own!		

DNA occurs in two forms:

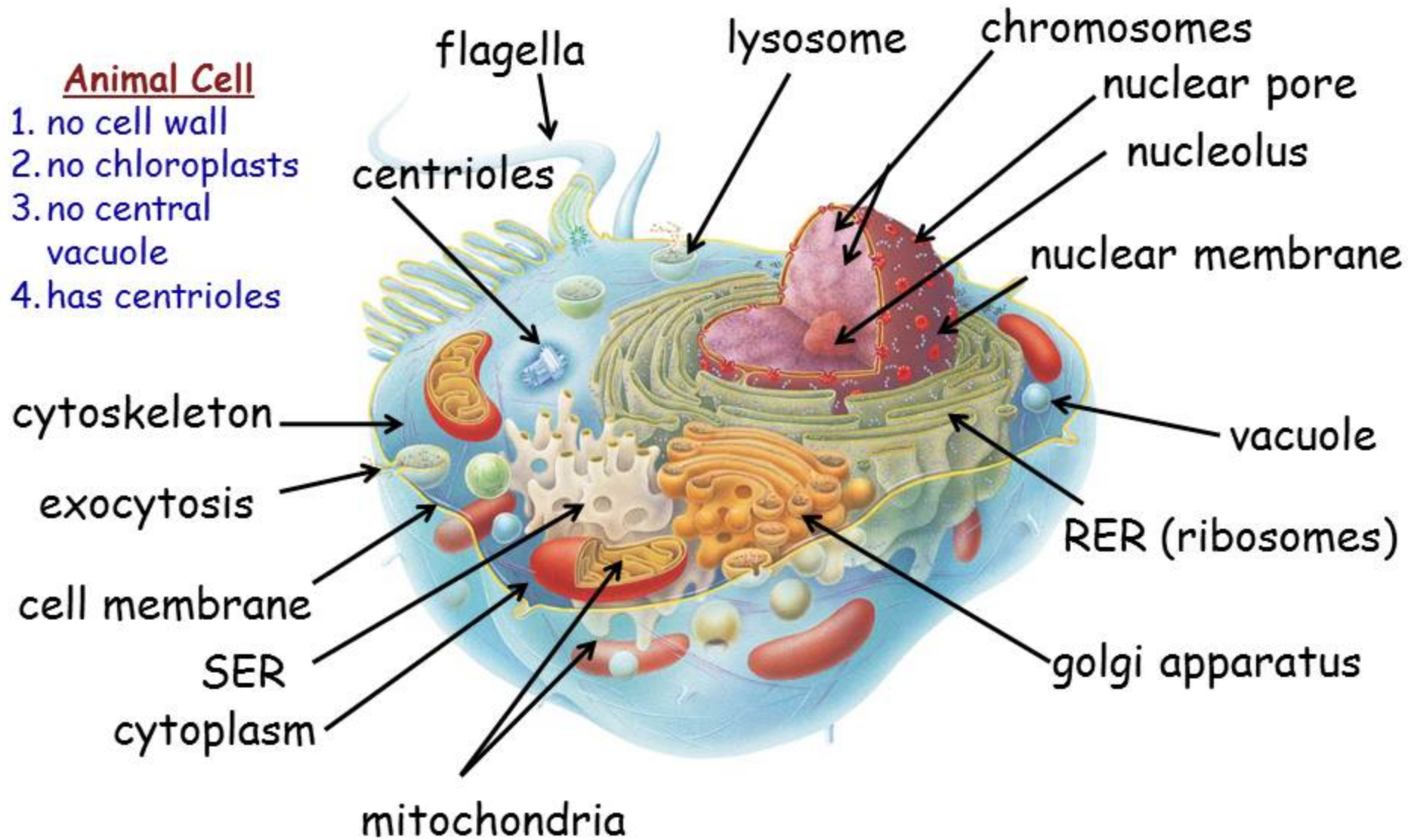
1. chromatin - long & thin
(when cell is not dividing)
2. chromosomes - short & thick
(during cell division)



Animal Cell Structure

Animal Cell

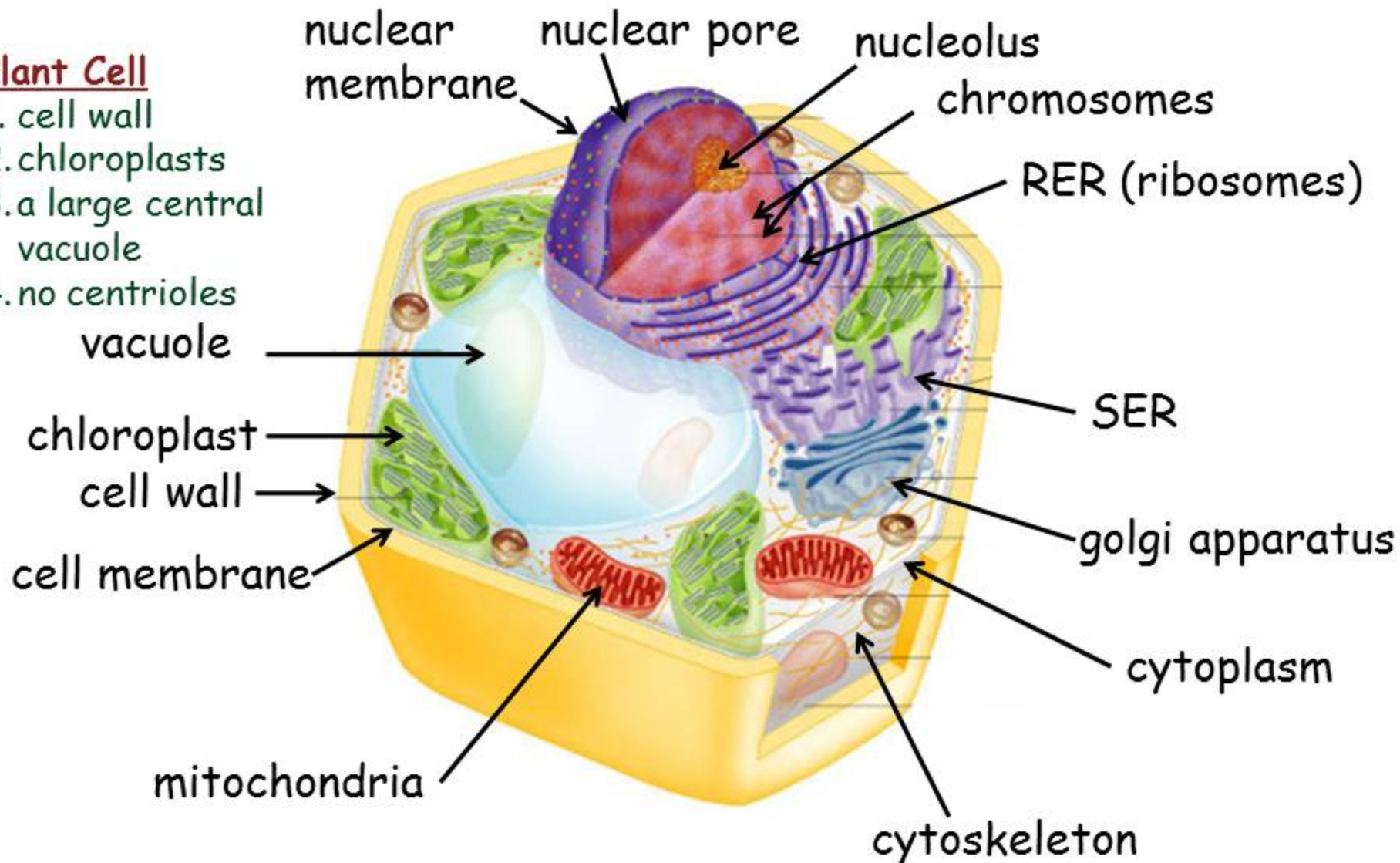
1. no cell wall
2. no chloroplasts
3. no central vacuole
4. has centrioles



Plant Cell Structure

Plant Cell

1. cell wall
2. chloroplasts
3. a large central vacuole
4. no centrioles



Structures of a Cell

How many do you remember?

Close all books and notes :)

cell wall

cilia / flagellum

large vacuole

cytoskeleton

small vacuole

secretory vesicles

mitochondria

Golgi apparatus

nuclear pores

rough endoplasmic reticulum

ribosomes

nuclear membrane

cell membrane

cytoplasm

centrioles

nucleolus

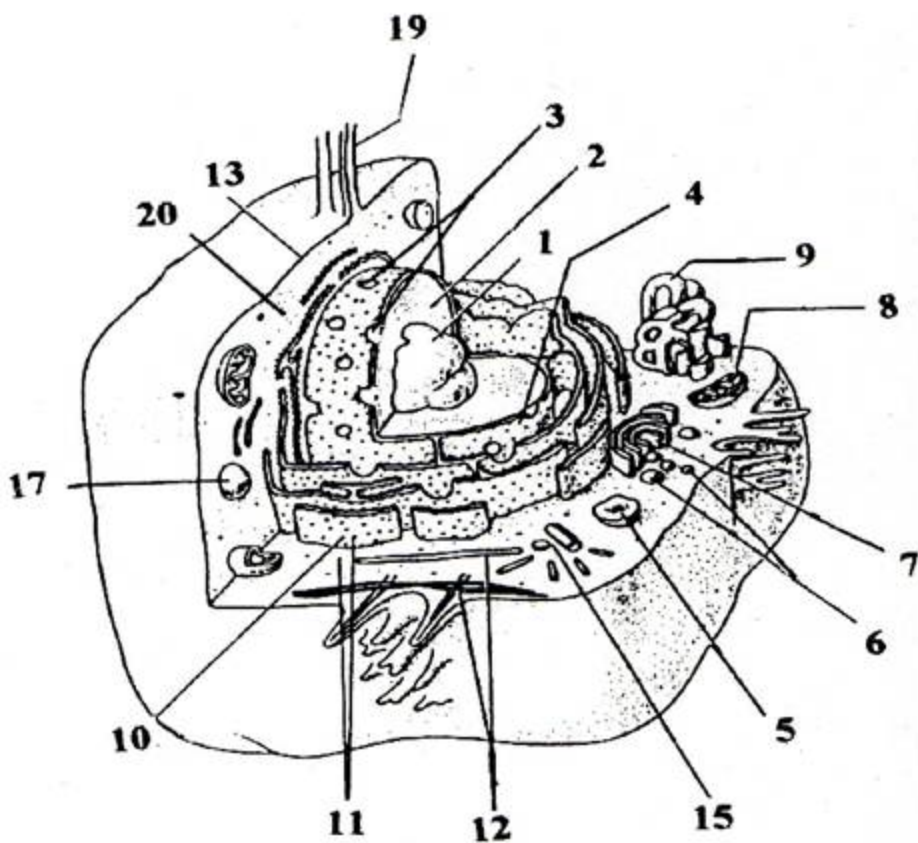
lysosome

chloroplast

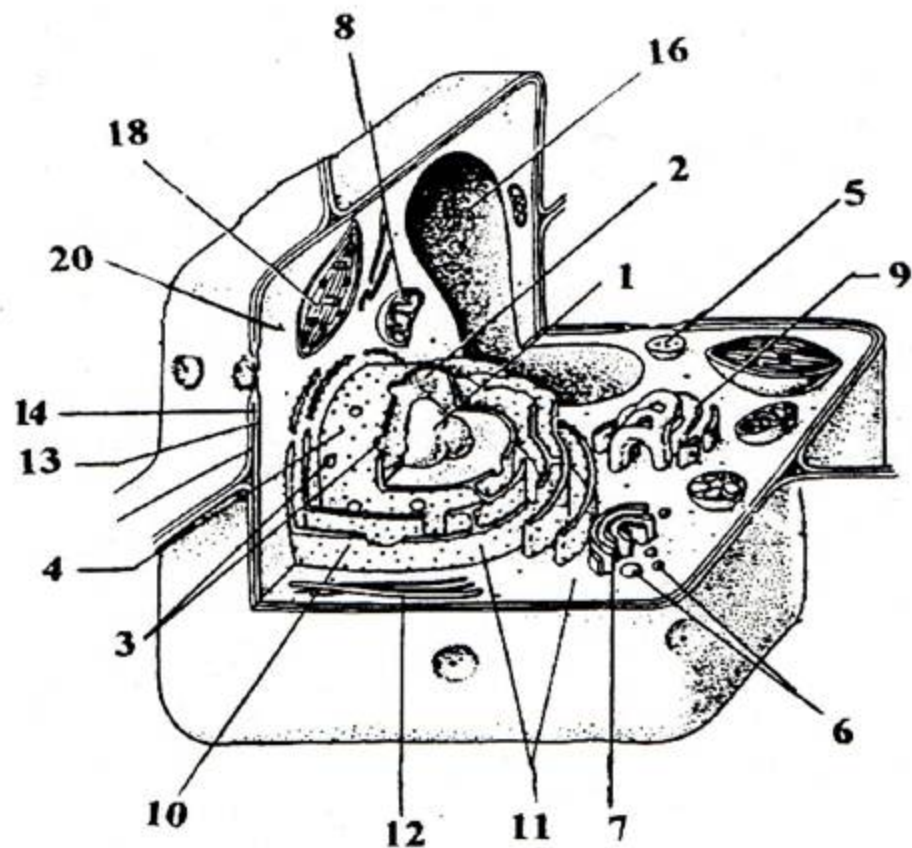
nucleoplasm (chromosomes)

smooth endoplasmic reticulum

ANIMAL CELL



PLANT CELL



Switch with a partner!

Place a small checkmark next to the correct answers.
Put their score out of 20 in the right hand corner.

- ☒ 1. nucleolus
- 2. nucleoplasm (chromosomes)
- 3. nuclear pores
- 4. nuclear membrane
- 5. small vacuole
- 6. secretory vesicles
- 7. Golgi apparatus
- 8. mitochondria
- 9. smooth endoplasmic reticulum
- 10. rough endoplasmic reticulum

- 11. ribosomes
- 12. cytoskeleton
- 13. cell membrane
- 14. cell wall
- 15. centrioles
- 16. large vacuole
- 17. lysosome
- 18. chloroplast
- 19. cilia / flagellum
- 20. cytoplasm

